

ABSTRACT

Disclosed is a functional element for use in an electric, an electronic or an optical device, and a method for producing the same. The functional element comprises a substrate having on an upper surface thereof a plurality of metal oxide needles extending upwardly of the upper surface of the substrate, with their respective central axes arranged substantially in parallel with each other, wherein the needles have a specific weighted average circle-based diameter and a specific weighted average aspect ratio, and wherein the needles are present at a specific density at the upper surface of the substrate. Also disclosed is a method for producing the functional element, which comprises gasifying a metal compound having the capability to react with an oxide-forming substance to form a metal oxide, to thereby obtain a metal compound gas, and applying the obtained metal compound gas onto a surface of a substrate which is placed in a reaction zone containing the oxide-forming substance and which is heated to a temperature higher than the temperature of the metal compound gas.

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